ADMINISTRATIVE-INTERNAL USE 1 LY

DATA CENTER OPERATIONS BRANCH

NDS OPERATIONS PROCEDURE MANUAL NO. P-D004

APPLICATIONS SOFTWARE 13 April 1983

DIRAZM PROGRAM

SYMBOLIC TITLE: DIRAZM PROGRAMMER:

STAT

ADMINISTRATIVE-INTERNAL USE ONLY

APPROVALS

This operations manual has been reviewed and approved by the following persons:

<u>Hfeb89</u>
(date)

2/5/82
(date)

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SUMMARY

Given a pair of points (point 1 and point 2) and given the geodetic latitude and longitude of point 1, the azimuth from point 1 to point 2, and the distance from point 1 to point 2, DIRAZM computes and prints—

- a. The geodetic latitude and longitude of point 2.
- b. The azimuth from point 2 to point 1.

The program can make computations on more than one pair of points.

2. INPUT

The following items must be input to DIRAZM for each pair of points.

a. Ellipsoid - Eight ellipsoids are available. You will input the mnemonic for the ellipsoid you have chosen. The ellipsoid must be specified for each pair of points. The ellipsoids are listed below:

WGS-72 WGS-66 WGS-60 KVY Bessel Clarke International

- b. Latitude and longitude of point 1. You must input degrees and direction; you may also input minutes and seconds. Decimal portions of degrees, minutes and seconds may be input if known.
- c. Units of distance the distance between points 1 and 2 may be measured in feet, meters, statutory miles, or nautical miles.
- d. Azimuth from point 1 to point 2. You must input degrees; you may also input minutes and seconds.

DATA CARDS

You will need six data cards for each pair of points. One data card will indicate the ellipsoid. The remaining five cards will show the latitude of point 1, the longitude of point 1, the azimuth from point 1 to point 2, the unit of distance used in measuring the distance between the two points, and the distance between point 1 and point 2.

AL INSTRATIVE INTERNAL USE ONLY

ELLIPSOID CARD

Begin in column one and punch the mnemonic for the ellipsoid you are using. You will punch one of the following:

WGS-72 WGS-66 WGS-60 KVY Bessel Clarke International

A sample card appears below.

438-72

LATITUDE CARD

This card indicates the latitude of a point. You will need a latitude card for point 1 and one for point 2.

Col	1	X	if	dir	is	North
Co1	2	X	if	dir	is	South
Col	3	De	gre	es		
Co1	8	Mi	nut	es		
Co1	13	Se	con	ıds		

3 20.00 0.0 0.0

NOMINISTRATIVE EVENTA LUBE CELL

LONGITUDE CARD

This card indicates the longitude of a point. You will need a longitude card for point 1 and one for point 2.

Col	1	X if direction	is	East
Col	2	X if direction	is	West
Col	3	Degrees		
Co1	9	Minutes		
Co1	14	Seconds		

x 040.00 0.0 0.0

AZIMUTH CARD

This card indicates the azimuth from point 1 to point 2. You must input degrees. You may also input minutes and seconds.

039,60 03.0 40.07

MARKET SELECTION OF SERVINO

UNIT OF DISTANCE CARD

This card indicates what unit is being used in measuring the distance between point 1 and point 2. Begin in column one and punch one of the following:

METERS
NAUT MILES
FEET
STAT MILES

STAT MILES

DISTANCE CARD

This card indicates the distance between point 1 and point 2. The number input may not exceed 14 characters, including the decimal, if any. Begin in column one.

00000325.11052

4. ARRANGING YOUR CARD DECK

Your card deck should be arranged as shown below.

1: aRUN DIRAZM.533741016/IJ ANCH.XOT S:854W+0 PFINIS 3: 9459+4 XOT*P#ABS. 4:ACOPY+ B XOT*P&ABS-D TRAZE+TPES. 5: @FREE+R XOT*PSARS. 4 CAXOT DIRAZM 7: WG S-72 PILATITUDE PARAMETER CAFD 9: LONGITUPE PARAMETER CARD 13:AZIMUTH PARAMETER CARD 11: UNIT OF MEASUREMENT PARAMETER CAPD 12:DISTANCE BETWEEN POINTS PARAMETER CAFC 13: EOT* 14:ABRKPT PEINTS 15: 0F IN

Other sets of data cards would be inserted after card #12 if there were more than one set of input points.

5. THE OUTPUT

DIRAZM outputs a printer listing. An example is shown below.

S: afree-R			ر الله الله الله الله الله الله الله الل	And the second
9:READY	the second se			
10: axqT	DIRAZM			
11:ELLIPSCIO	WGS-72	the second of the second of		and the price of the Additional Control of the Cont
12: P1-P2 089	0.00 09.0 40.07	· · · · · ·		1
13:00000 325.	11052STAT MILES		* * * * * * * * * * * * * * * * * * *	
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	X 20.000 C1.00F			
19:	a way		+ 54	
20: 21:abrkp1 pi	PIN 15			
				2'

ANGEL CONTROL OF THE SECOND

SAMPLE CARD DECK

AND THE PROPERTY OF THE PROPER
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/SERKPT PRINTS: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
/EUT*
/\displaystation \displaystation \displaystati
STAT MILES
/089.00.08.0.40.07
× 040.00 0.0 0.0
/X 20.00 0.0 0.0.
/MGS-72
//XOT DIRAZM
//FREE.R XOT*P\$ABS.
North tall unital subpartitualitate (19)
// ASG, A XDT*P\$ABS; A X.C. A A CONTROL A CANADA A CONTROL A CANADA A CONTROL A CANADA A CONTROL A CANADA A CA
/"SYM.D PRINTS
TRUN DIRAZM, S33741016/1VANCH, XDT
- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
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